

AMENDMENTS TO THE SPECIFICATION

Please replace the single paragraph in the RELATED APPLICATIONS section of the application, on page 1, with the following amended paragraph:

This application is a continuation-in-part of application Serial No. 09/963,190 filed September [[9]] 25, 2001, now patent No. 6,596,111, issued July 22, 2003.

Please replace the second paragraph of the BACKGROUND AND SUMMARY OF THE INVENTION section, beginning on page 1, with the following amended paragraph:

There are numerous applications where a continuous supply of tape material must be provided. When this occurs there needs to be a way of attaching the trailing edge of one roll of tape to the leading edge of another roll of tape without interrupting the feeding of the tape. This can be accomplished by placing a mechanical fastening device on the tape or by adhesively joining the two tapes together. An example of the latter is the system disclosed in U.S. Patent Application Serial No. 09/398,153, now Patent No. 6,325,324. Here the trailing edge of the tape on each roll is wrapped around a plate to provide an end piece which is thicker than the remainder of the tape. The leading edge of the tape on each roll has an adhesive coating applied to it. The leading edges of both rolls are then fed into a splicer block having a pair of spaced-apart pincher rollers which are separated by a distance which is greater than the thickness of two pieces of tape, but less than the thickness of one piece of tape and the end piece. Thus, when the tape from one of the rolls is pulled through the splicer block, as the trailing end of that roll passes through the pincher rollers the end piece is squeezed against the adhesive at the leading edge of the tape from the other roll, and the two pieces of tape are joined. While simple and inexpensive, this system does not always cause the two pieces of tape to be joined. Because

the adhesive is exposed during the entire time the preceding roll of tape is being unwound, it can collect dust and other contaminants and become less adherent. In addition, in order for the adhesive to even be squeezed against the end piece it must be located precisely between the pincher rollers. If the operator does not do this correctly or if the moving tape drags the non-moving tape out of the pincher rollers the rolls will not be joined. In addition, the second roll can only be installed on the device which rotatively carries it in one direction in order that the adhesive side of the tape is facing the moving tape. If adhesive is put on both sides of the tape to make it reversible, the adhesive on the other side may very well stick to the pincher rollers enough that the short period of time the adhesive is exposed to the moving tape may not be enough to release it.

Please replace the third paragraph in the BRIEF DESCRIPTION OF THE DRAWINGS section, on page 5, with the following amended paragraph:

~~FIGS. FIG. 3 and 4 are~~ is a side elevation view of a splicer mechanism showing how the trailing edge of a first piece of tape is spliced to the leading edge of a second piece of tape.

Please amend the fourth paragraph in the BRIEF DESCRIPTION OF THE DRAWINGS section, on page 5, with the following amended paragraph:

FIG. ~~[[5]] 4~~ is a perspective view of another splicer mechanism embodying the subject invention.

Please amend the fifth paragraph of the BRIEF DESCRIPTION OF DRAWINGS section, on page 5, with the following amended paragraph:

FIG. ~~[[6]] 5~~ is a front elevational view of the splicer mechanism of FIG. ~~[[5]] 4~~.

Please replace the sixth paragraph in the BRIEF DESCRIPTION OF DRAWINGS section, on page 5, with the following new paragraph:

FIG. ~~[[7]]~~ 6 is a rear view of the splicer mechanism of FIG. ~~[[5]]~~ 4.

Please replace the seventh paragraph of the BRIEF DESCRIPTION OF DRAWINGS section, on page 5, with the following amended paragraph:

FIGS. ~~[[8]]~~ 7 and ~~[[9]]~~ 8 are front views of the splicer mechanism of FIG. ~~[[5]]~~ 4 showing a sequence of operation.

Please amend the eighth paragraph of the BRIEF DESCRIPTION OF DRAWINGS section, on page 5, with the following amended paragraph:

FIG. ~~[[10]]~~ 9 is a front view of another embodiment of the invention.

Please replace the ninth paragraph of the BRIEF DESCRIPTION OF DRAWINGS section, the first paragraph on page 6, with the following amended paragraph:

FIG. ~~[[11]]~~ 10 is a front view of yet another embodiment of the invention.

Please replace the tenth paragraph of the BRIEF DESCRIPTION OF DRAWINGS section, the second paragraph on page 6, with the following amended paragraph:

FIG. ~~[[12]]~~ 11 is a detailed view showing how a bulge is placed in the tape.

Please replace the second paragraph on page 11 with the following amended paragraph:

Referring now to ~~FIGS.~~ FIG. 3 ~~[[and 4]]~~, a splicer mechanism 55 that is used to join the tail 10 of one roll of tape to the leading edge of another roll includes a frame 56 having an entry passageway 57 located at its lower end. Located above the entry passageway 57 is a pair of spaced-apart guide rollers 58. Located above the guide rollers is a bridge 60 with a

guide orifice 62 passing centrally through it. Extending upwardly from the bridge 60 on each side of the guide orifice is a pair of pins 64 which angle toward one another. A tape-holding device, such as a spring 66, is located above the bridge 60, and a pair of side-by-side pincher rollers 68 are located above the spring. The distance between the pinching rollers is greater than the combined width of the tape 12 but less than twice the width of the tape and the bulge 18.

Please replace the first paragraph on 13 with the following amended paragraph:

In another embodiment of the invention, shown in FIGS. 4-[[11]] 10, the adhesive is eliminated altogether and tightening the loose knot in the leading edge of the tape from the second roll around the tail of the tape from the first roll is the only means of attachment. Referring to FIG. [[1]] 4, a splicer mechanism 80 includes a frame 82. Located at the lower edge of the frame is an entry passageway 84 and located at the upper end of the frame is an exit passageway 86. Tape fed through the upper and lower passageways travels across the frame over a defined pathway 88. Located near the upper end of the frame is a moveable roller 90 and a fixed roller 92. The tape passes between these two rollers but the rollers are separated from one another by a sufficient distance that they create negligible drag on the tape and the tape causes little, if any, rotation of the rollers under normal operating conditions. The face 94 of the moveable roller 90 is flat, and the face 96 of the fixed roller 92 has a flat center 96a having a width which is slightly greater than the width of the face 94 of the moveable roller 90. Located on each side of the center 96a are outwardly flared sections 96b. This shape causes the tape to remain centered between the two rollers. An idler roller 98, which is located above the rollers 90 and 92, pushes the tape toward the fixed roller 92 which also helps keep the tape centered.

Please replace the first paragraph on page 14 with the following amended paragraph:

Rotatably mounted at the bottom of the frame 82, on the same side as the pathway 88, are a pair of arms 100. Posts 102 extend outwardly from the extremities of the arms. The arms are moveable between a first position, FIG. ~~[[4]]~~ 5, and a second position, FIG. ~~[[8]]~~ 7. In the first position the arms are generally vertical and the posts are generally aligned with the tape with one post being on each side of the pathway. In the second position the arms are angled away from the tape and the posts are moved further from the pathway. The arms are mounted on one end of shafts which extend rotatably through the frame. The other end of the shafts are attached to levers 106. Thus, each lever 106 rotates with its associated arm 100. The levers are mounted on the shafts such that they are generally horizontal when the arms are generally vertical. When in this position the inner ends 108 of the levers are located close to the center of the frame, and the outer ends 110 of the levers are located outwardly from the sides of the frame.

Please replace the last paragraph on page 17 with the following amended paragraph:

In another alternative embodiment, shown in FIG. 10, rather than a bulge a patch 140, which is optically distinct from the tape, is placed in the tail of the tape. The patch ~~[[40]]~~ 140 can be clear, reflective, or just another color than the color of the tape. A photo cell 142, located alongside the pathway 88, detects when the patch passes by it and then activates the solenoids 138.